

## **CLAIMS**

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What is claimed is:

- 1. A polycarbonate-based nonflammable resin composition, characterized by containing:
  - a. a polycarbonate-based resin (A-1);
  - b. a phosphoric ester (B) expressed by the following formula:

where  $R^1$ ,  $R^2$ ,  $R^3$ , and  $R^4$  are each independently a  $C_1$  to  $C_{30}$  hydrocarbon; X is a  $C_1$  to  $C_{30}$  divalent organic group that may contain an oxygen atom and/or a nitrogen atom; and m is an integer from 0 to 5);

c. an alkoxy group-containing organopolysiloxane (C) expressed by the following average compositional formula:

$$R^{1}aSi(OR^{2})bO_{(4-a-b)/2}$$
 ... (1)

where  $R^1$  is a substituted or unsubstituted univalent hydrocarbon group containing an aryl group as an essential component;  $R^2$  is a substituted or unsubstituted univalent hydrocarbon group;  $R^1$  and  $R^2$  may be the same as or different from each other;  $0.2 \le a \le 2.7$ ;  $0.2 \le b \le 2.4$ ; and a + b < 3,

wherein

said phosphoric ester (B) being contained in an amount of 0.5 to 20 weight parts and said alkoxy group-containing organopolysiloxane (C) in an amount of 0.05 to 20 weight parts per 100 weight parts of the polycarbonate-based resin (A-1).

- 2. A polycarbonate-based nonflammable resin composition, characterized by containing:
  - a. a polycarbonate-based resin (A-1);

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- b. a thermoplastic resin (A-2) other than a polycarbonate-based resin;
  - c. a phosphoric ester expressed by the following formula:

where  $R^1$ ,  $R^2$ ,  $R^3$ , and  $R^4$  are each independently a  $C_1$  to  $C_{30}$  hydrocarbon; X is a  $C_1$  to  $C_{30}$  divalent organic group that may contain an oxygen atom and/or a nitrogen atom; and m is an integer from 0 to 5; and

d. an alkoxy group-containing organopolysiloxane (C) expressed by the following average compositional formula:

$$R^{1}_{a}Si(OR^{2})_{b}O_{(4-a-b)/2}$$
 ... (1)

where  $R^1$  is a substituted or unsubstituted univalent hydrocarbon group containing an aryl group as an essential component;  $R^2$  is a substituted or unsubstituted univalent hydrocarbon group;  $R^1$  and  $R^2$  may be the same as or different from each other;  $0.2 \le a \le 2.7$ ;  $0.2 \le b \le 2.4$ ; and a + b < 3,

wherein

said phosphoric ester (B) being contained in an amount of 0.5 to 20 weight parts and said alkoxy group-containing organopolysiloxane (C) in an amount of 0.05 to 20 weight parts per combined 100 weight parts of the polycarbonate-based resin (A-1) and the thermoplastic resin other than a polycarbonate-based resin (A-2).

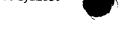
3. A polycarbonate-based nonflammable resin composition as defined in Claim 1 or 2, characterized in that the phosphoric ester is bisphenol Atetraphenyl diphosphate (BPADP) or bisphenol A tetracresyl diphosphate.

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- 4. A polycarbonate-based nonflammable resin composition as defined in Claim 1 or 2, wherein the weight average molecular weight of the alkoxy group-containing organopolysiloxane (C) is between 300 and 6000.
- A polycarbonate-based nonflammable resin composition as defined in any of Claims 1 to 4, characterized in that the alkoxy group-containing organopolysiloxane (C) includes a branched structure.
- 6. A polycarbonate-based nonflammable resin composition as defined in any of Claims 1 to 5, characterized in that the alkoxy group-containing organopolysiloxane (C) contains substantially no silanol groups (SiOH).
- 7. A polycarbonate-based nonflammable resin composition as defined in any of Claims 1 to 6, characterized in that R¹ of the alkoxy group-containing organopolysiloxane (C) is a methyl group, ethyl group, or phenyl group, and the phenyl group content is at least 20%.
- 8. A polycarbonate-based nonflammable resin composition as defined in any of Claims 1 to 7, characterized in that R<sup>2</sup> of the alkoxy group-containing organopolysiloxane (C) is a methyl group or ethyl group.
- 9. A polycarbonate-based nonflammable resin composition as defined in Claim 2, characterized in that the thermoplastic resin (A-2) is one or more types of resin selected from the group consisting of:

polymers including as a structural component (a) an aromatic vinyl monomer component;

copolymers including as structural components (a) an aromatic vinyl monomer component and (b) a vinyl cyanide monomer component;

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copolymers including as structural components (a) an aromatic vinyl monomer component, (b) a vinyl cyanide monomer component, and (c) a rubber-like polymer;

aromatic polyesters;
polyphenylene ethers;
polyether imides; and
polyphenylene sulfides.

10. A polycarbonate-based nonflammable resin composition as defined in
 Claim 9, characterized in that the thermoplastic resin (A-2) is one or more types of resin selected from the group consisting of ABS resins, AES resins, ACS resins, AAS resins, and polystyrene resins.

A polycarbonate-based nonflammable resin composition as defined in any of Claims 1 to 10, characterized by further containing (D) an anti-drip agent in an amount of 0.01 to 10 weight parts per 100 weight parts of the polycarbonate-based resin (A-1) or per combined 100 weight parts of the polycarbonate-based resin (A-1) and the thermoplastic resin (A-2).

12. The polycarbonate-based nonflammable resin composition as defined in Claim 11, characterized in that the anti-drip agent is polytetrafluoroethylene (PTFE).

A polycarbonate-based nonflammable resin composition as defined in any of Claims 1 to 12, characterized by further containing (E) an alkali (alkaline earth) metal salt of a perfluoroalkanesulfonic acid in an amount of 0.01 to 3 weight parts per 100 weight parts of the polycarbonate-based resin (A-1) or per combined 100 weight parts of the polycarbonate-based resin (A-1) and the thermoplastic resin (A-2).

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- 14. A polycarbonate-based nonflammable resin composition as defined in any of Claims 1 to 13, characterized by further containing (F) an epoxy-based stabilizer in an amount of 0.01 to 5 weight parts per 100 weight parts of the polycarbonate-based resin (A-1) or per combined 100 weight parts of the polycarbonate-based resin (A-1) and the thermoplastic resin (A-2).
- 15. A polycarbonate-based nonflammable resin composition as defined in Claim 14, characterized in that the epoxy-based stabilizer (F) is 3,4-epoxycyclohexylmethyl-3',4'-epoxycyclohexanecarboxylate or bis-(3,4-epoxycyclohexyl) adipate.
- An electrical or electronic device part formed from a nonflammable resing composition as defined in any of Claims 1 to 15.
- 15 17. A molded article composed of a nonflammable resin composition as defined in any of Claims 1 to 15.